

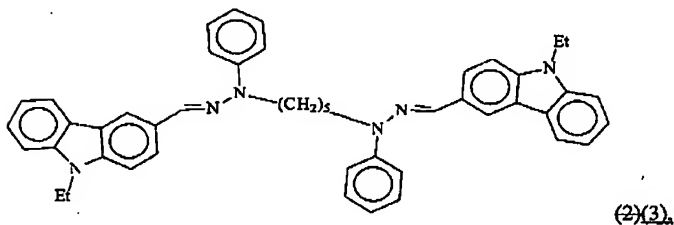
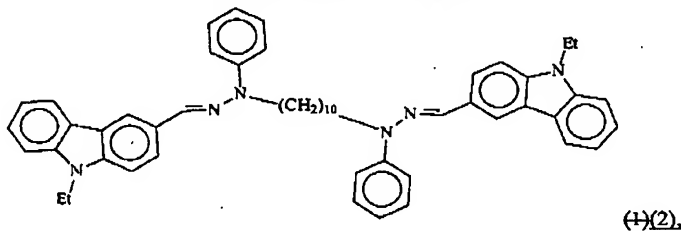
Application No: 10/748,496

AMENDMENTS TO THE SPECIFICATION

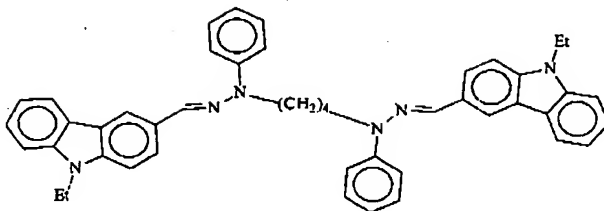
Please substitute the following amended paragraph(s) and/or section(s) (deleted matter is shown by strikethrough and added matter is shown by underlining):

A. Please amend the following paragraph at page 8, line 4 to page 9, line 5 as follows:

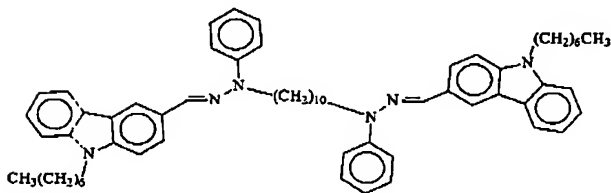
The invention also features the charge transport compounds themselves. In one preferred embodiment, a charge transport compound is selected in which n is 2, Y is a bond or a $-\text{CH}_2-$ group, X has the formula $-(\text{CH}_2)_m-$ where m is an integer between 2 and 5, inclusive, and R_1 is an ethyl, heptyl, or $-(\text{CH}_2)_3\text{C}_6\text{H}_5$ group. Specific examples of suitable charge transport compounds have the following formulae:



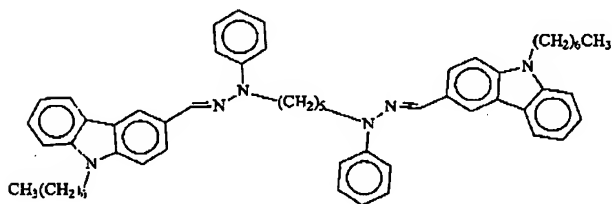
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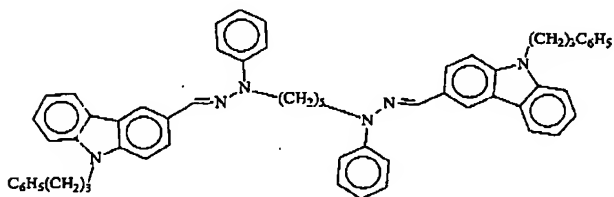
(3)(4).



(4)(5).



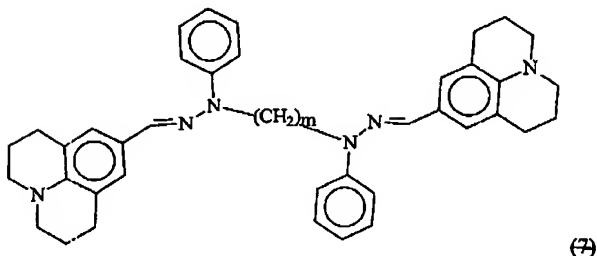
(5)(6), and



(6)(7).

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- B. Please amend the structure at page 9, line 11 as follows:

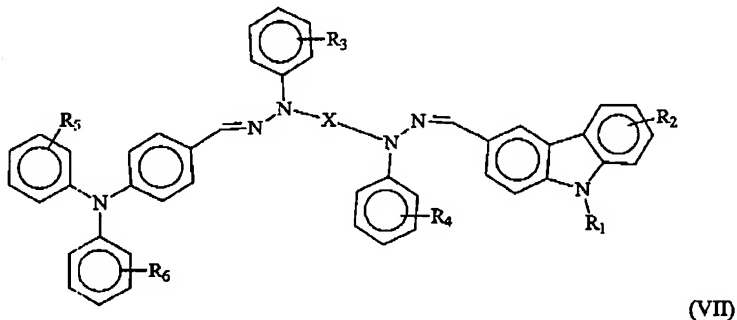


- C. Please amend the following paragraph at page 12, lines 2-4 as follows:

Specific subgeneric examples of charge transport compound according to formula ~~(IV)~~(V) have the following general formula ~~(V)~~(VI) where m is an integer between 2 and 20; more preferably m is an integer between 4 and 10.

- D. Please amend the following paragraph at page 12, line 6 to page 13, line 15 as follows:

Another example of such a mixed charge transport compound has the formula ~~(V)~~(VII):



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where R_1 is hydrogen, a branched or linear alkyl group (e.g., a C_1 - C_{20} alkyl group), a branched or linear unsaturated hydrocarbon group, a cycloalkyl group (e.g. a cyclohexyl group), or an aryl group (e.g., a phenyl or naphthyl group);

R_2 , R_3 , R_4 , R_5 , and R_6 are, independently, hydrogen, a halogen atom, hydroxy group, thiol group, an alkoxy group, a branched or linear alkyl group (e.g., a C_1 - C_{20} alkyl group), a branched or linear unsaturated hydrocarbon group, an ether group, nitro group, an amino group, a cycloalkyl group (e.g. a cyclohexyl group), or an aryl group (e.g., a phenyl or naphthyl group); and

X is a linking group having the formula $-(CH_2)_m-$, branched or linear, where m is an integer between 0 and 50, inclusive, and one or more of the methylene (CH_2) groups is optionally replaced by oxygen atom, sulfur atom, a carbonyl group, an urethane group, an urea group, an ester group, an aryl group, a heterocyclic group, a cycloalkyl group, a cyclosiloxyl group (e.g., a cyclotetrasiloxyl group), a cycloalkyl group, a cyclosiloxyl group (e.g., a cyclotetrasiloxyl group), a NR_7 group, a CHR_8 group, or a CR_9R_{10} group where R_7 , R_8 , R_9 , and R_{10} , are, independently, H, an alkyl group, or an aryl group.

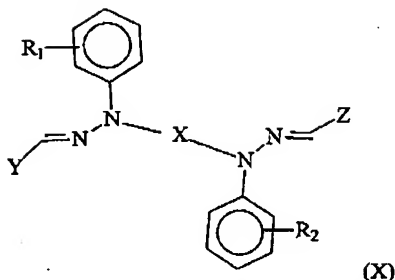
E. Please amend the following paragraph at page 13, line 16-20 as follows:

In one specific embodiment of structural Formula ~~(VI)~~ (VII), a charge transport compound is selected in which X is a $-(CH_2)_m-$ group where m is an integer between 2 and 20, R_1 is an alkyl group, and R_2 , R_3 , R_4 , R_5 and R_6 are hydrogen. Specific examples of suitable charge transport compound have the following general formula where m is an integer between 2 and 20; more preferably m is an integer between 4 and 10.

F. Please amend the following paragraph at page 14, line 20 to page 15, line 14 as follows:

Another generic formula ~~(IX)~~ (X) is directed to charge transport compounds having the formula

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wherein R_1 and R_2 are, independently, hydrogen, a halogen atom, hydroxy group, thiol group, an alkoxy group, a branched or linear alkyl group (e.g., a C_1 - C_{20} alkyl group), a branched or linear unsaturated hydrocarbon group, an ether group, nitro group, an amino group, a cycloalkyl group (e.g. a cyclohexyl group), or an aryl group (e.g., a phenyl or naphthyl group);

X is a linking group having the formula $-(CH_2)_m-$, branched or linear, where m is an integer between 0 and 50, inclusive, and one or more of the methylene groups is optionally replaced by a bond, an oxygen atom, a sulfur atom, a carbonyl group, an urethane group, an urea group, an ester group, an aryl group, a heterocyclic group, a NR_4 group, a CHR_5 group, or a CR_6R_7 group where R_4 , R_5 , R_6 , and R_7 are, independently, H, an alkyl group, or an aryl group; and

Y and Z are, independently, a carbazole group, a triphenylamine group, a julolidine group, or any of their derivatives.

G. Please amend the following paragraph at page 47, lines 3-7 as follows:

Melting Point of Compound (~~4213~~) was collected using a TA Instruments Model 2929 Differential Scanning Calorimeter (New Castle, DE) equipped with a DSC refrigerated cooling system (-70°C minimum temperature limit), and dry helium and nitrogen exchange gases. The calorimeter ran on a Thermal Analyst 2100 workstation with version 8.10B software. An empty aluminum pan was used as the reference.

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H. Please amend the following paragraph at page 47, lines 19-28 as follows:

Inverted dual layer organophotoreceptors were prepared incorporating Compound (~~4213~~) and Comparative Example A (Formula (3) of U.S. Patent No. 6,066,426) obtained according to U.S. Patent No. 6,066,426. A charge transport solution containing 50 wt. % of Compound (3) in Polycarbonate Z binder was prepared by combining a solution of 1.25 g of Compound (3) in 8.0 g of tetrahydrofuran with 1.25 g of Polycarbonate Z in 2.50 g of toluene. The charge transport solution was then hand-coated with a Maier rod (# 40) onto a 76 micrometer (3 mil) thick aluminized polyethylene terephthalate film (Melinex 442 polyester film from Dupont having a 1 ohm/square aluminum vapor coat) having a 0.3 micron polyester resin sub-layer (Vitel PE-2200 from Bostik, Middletown, MA) and dried to form a charge transport layer having a thickness of 9 micrometers.

I. Please amend the following paragraph at page 48, lines 15-27 as follows:

Electrostatic testing of Compound (~~4213~~) and a control (structure was performed and recorded on a QEA PDT-2000 instrument at ambient temperature. Charge-up was performed at 8 kV. Discharge was performed by exposing the photoreceptor to a 780 nm-filtered tungsten light source down a fiber optic cable. Each sample was exposed to 2 microjoules/cm² of energy for 0.05 seconds; the total exposure intensity was 20 microwatts/cm². After charge-up, the acceptance voltage (V_{acc}) was measured in volts. This value was recorded as V_{acc} after one cycle. Following this initial charge-up, a one second dark decay followed before the sample was discharged with the 0.05 second light pulse of 2 microjoules/cm² at 780 nm, one second after which the decrease in voltage (Contrast) was measured in volts. Then the charge on the sample was further reduced by an eraser lamp. The final residual voltage (V_{res}) on the sample was measured in volts. V_{acc} and V_{res} were also measured after a total of 1000 cycles. In general, it is desirable to maximize V_{acc} and to minimize V_{res} .

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J. Please amend Table 1 at page 49, lines 1-3 as follows:

TABLE 1.

Sample	V _{acc} (V)	Dark Decay (V)	V _{res} (V)	Contrast (V)
Compound 3 <u>13</u>	363	142	18	195
Comparative Example A	377	135	16	211

K. Please amend the following paragraph at page 49, lines 4-5 as follows:

The data in Table 2 indicate that Compound (~~12~~13) is suitable for making photoreceptors.

L. Please amend the following paragraph with its heading at page 52, line 19 to page 53, line 2 as follows:

Evaluation of a mixture of Compound ~~4~~2 and Compound ~~2~~3

The following solutions were prepared and did not precipitate when left overnight in THF (tetrahydrofuran) solvent. A 15% solid and a 20% solid formulation of a 1-to-1 ratio of polycarbonate (CTM:PCZ200), using a 50:50 mixture of Compound ~~4~~2 and Compound ~~2~~3 (referred to in the Table as Cmpd 1,2) for the CTM. Both of these solutions were knife coated on PET (polyethylene terephthalate) using the above described positive charging IDL construction. The electrostatics were recorded on Hawk Mech and compared with two other samples of compound 2 of U.S. Patent No. 6,140,004 (referred to in the table as PA) at 15% and 20% solids, as shown in Table 2 below, the following table: